

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A strain of *M. bovis* BCG, wherein said strain has integrated the DNA fragment RD1-2F9, which comprises 31808 bp of DNA originating from *Mycobacterium tuberculosis* or any virulent member of the *Mycobacterium tuberculosis* complex (*M. africanum*, *M. bovis*, *M. canettii*), and ~~which is designated as~~ having SEQ ID NO:1, and which is responsible for enhanced immunogenicity and increased persistence of BCG to the tubercle bacilli.

2-3. (Canceled)

4. (Currently amended) A strain according to claim 72, wherein said strain has integrated a portion of DNA originating from *Mycobacterium tuberculosis* or any virulent member of the *Mycobacterium tuberculosis* complex (*M. africanum*, *M. bovis*, *M. canettii*), wherein the integrated DNA further comprises at least nine ~~or more~~ genes ~~or fragments thereof~~ selected from the group consisting of: Rv3861 (SEQ ID NO:4), Rv3862 (SEQ ID NO:5), Rv3863 (SEQ ID NO:6), Rv3864 (SEQ ID NO:7), Rv3865 (SEQ ID NO:8), Rv3866 (SEQ ID NO:9), Rv3867 (SEQ ID NO:10), Rv3868 (SEQ ID NO:11), Rv3869 (SEQ ID NO:12), Rv3870 (SEQ ID NO:13), ~~Rv3871 (SEQ ID NO:14),~~ Rv3872 (SEQ ID NO:15, mycobacterial PE), Rv3873 (SEQ ID NO:16, PPE), ~~Rv 3874 (SEQ ID NO:17, CFP 10), Rv3875 (SEQ ID NO:18, EST 6), Rv 3876 (SED ID NO:19),~~ Rv3877 (~~seq id no:20~~), Rv3878 (SEQ ID NO:21), Rv3879 (SEQ ID NO:22), Rv3880 (SEQ ID NO:23), Rv3881 (SEQ ID NO:24), Rv3882 (SEQ ID NO:25), Rv3883 (SEQ ID NO:26), Rv3884 (SEQ ID NO:27), and Rv3885 (SEQ ID NO:28).

5. (Currently amended) A strain according to claim 72, wherein said strain has integrated a portion of DNA originating from *Mycobacterium tuberculosis* or any virulent member of the *Mycobacterium tuberculosis* complex (*M. africanum*, *M. bovis*, *M. canettii*), wherein the integrated DNA further comprises at least the gene Rv3867 (SEQ ID NO:10), ~~or a fragment thereof~~, combined with at least one gene ~~or a fragment thereof~~ selected from the group consisting of: Rv3872 (SEQ ID NO:15, mycobacterial PE), and Rv3873 (SEQ ID NO:16, PPE).

6-11. (Canceled)

12. (Currently amended) A strain according to claim 72, wherein said strain has integrated a portion of DNA originating from *Mycobacterium tuberculosis* or any virulent member of the *Mycobacterium tuberculosis* complex (*M. africanum*, *M. bovis*, *M. canettii*), wherein the integrated DNA further comprises the gene Rv3872 (SEQ ID NO:15, mycobacterial PE).

13. (Currently amended) A strain according to claim 12, wherein said strain has integrated a portion of DNA originating from *Mycobacterium tuberculosis* or any virulent member of the *Mycobacterium tuberculosis* complex (*M. africanum*, *M. bovis*, *M. canettii*), wherein the integrated DNA further comprises the gene Rv3873 (SEQ ID NO:16, PPE).

14. (Currently amended) A strain according to claim 13, wherein said strain has integrated a portion of DNA originating from *Mycobacterium tuberculosis* or any virulent member of the *Mycobacterium tuberculosis* complex (*M. africanum*, *M. bovis*, *M. canettii*), wherein the integrated DNA further comprises at least one gene ~~or a fragment thereof~~ selected from the group consisting of Rv3861; (SEQ ID NO:4), Rv3862 (SEQ ID

NO:5), Rv3863 (SEQ ID NO:6), Rv3864 (SEQ ID NO:7), Rv3865 (SEQ ID NO:8), Rv3866 (SEQ ID NO:9), Rv3867 (SEQ ID NO:10), Rv3878 (SEQ ID NO:21), Rv3879 (SEQ ID NO:22), Rv3880 (SEQ ID NO:23), Rv3881 (SEQ ID NO:24), Rv3882 (SEQ ID NO:25), Rv3883 (SEQ ID NO:26), Rv3884 (SEQ ID NO:27), and Rv3885 (SEQ ID NO:28).

15-17. (Canceled)

18. (Previously presented) A strain according to claim 72, wherein the coding sequence of the integrated gene is in frame with its natural promoter or with an exogenous promoter, such as a promoter capable of directing high level of expression of said coding sequence.

19. (Canceled)

20. (Currently amended) A strain according to claim 18, wherein said strain ~~only carries parts of the genes coding for ESAT-6 or CFP-10 in a mycobacterial expression vector under the control of a promoter, more particularly an hsp60 promoter.~~

21. (Currently amended) A strain according to claim 18, wherein said strain carries ~~at least one~~ a portion of the esat 6 gene that codes for immunogenic 20-mer peptides of ESAT-6 active as T-cell epitopes.

22-23. (Canceled)

24. (Currently amended) An *M. bovis* BCG::RD1 strain, which has integrated ~~a cosmid herein referred to as RD1-2F9~~ therein SEQ ID NO:1, and which is contained in the *E. coli* strain deposited at the CNCM under the accession number I-2831.

25-42. (Cancelled)

43. (Previously presented) A pharmaceutical composition comprising a strain according to claim 72 and a pharmaceutically acceptable carrier.

44. (Currently amended) A pharmaceutical composition according to claim 43, wherein the ~~containing~~ suitable pharmaceutically-acceptable carrier comprises excipients and auxiliaries which facilitate processing of the living vaccine into preparations which can be used pharmaceutically.

45. (Currently amended) A pharmaceutical composition according to claim 43 which is suitable for oral, intravenous, or subcutaneous administration.

46. (Previously presented) A vaccine comprising a strain according to claim 72 and a suitable carrier.

47. (Currently amended) A product comprising a strain according to claim 72 and at least one protein selected from ESAT-6 and CFP-10, ~~or epitope derived thereof~~ for a separate, simultaneous, or sequential use for treating tuberculosis.

48-61. (Canceled)

62. (Currently amended) A strain according to claim 72, which has integrated a portion of DNA originating from *Mycobacterium tuberculosis* or any virulent member of the *Mycobacterium tuberculosis* complex (*M. africanum*, *M. bovis*, *M. canettii*), wherein the integrated DNA further comprises at least one gene ~~or fragment thereof~~ selected from the group consisting of: Rv3878 (SEQ ID NO:21), Rv3879 (SEQ ID NO:22), Rv3880 (SEQ ID NO:23), Rv3881 (SEQ ID NO:24), Rv3882 (SEQ ID NO:25), Rv3883 (SEQ ID NO:26), Rv3884 (SEQ ID NO:27), and Rv3885 (SEQ ID NO:28), in combination with at least one gene ~~or a fragment thereof~~ selected from the group

consisting of Rv3872 (SEQ ID NO:15, mycobacterial PE) and Rv3873 (SEQ ID NO:16, PPE).

63. (Cancelled)

64. (Currently amended) A strain according to claim 72, wherein the strain has integrated a portion of DNA originating from *Mycobacterium tuberculosis* or any virulent member of the *Mycobacterium tuberculosis* complex (*M. africanum*, *M. bovis*, *M. canettii*), wherein the integrated DNA further comprises at least one gene or fragment thereof selected from the group consisting of: Rv3861 (SEQ ID NO:4), Rv3862 (SEQ ID NO:5), Rv3863 (SEQ ID NO:6), Rv3864 (SEQ ID NO:7), Rv3865 (SEQ ID NO:8), Rv3866 (SEQ ID NO:9), Rv3867 (SEQ ID NO:10), Rv3880 (SEQ ID NO:23), Rv3881 (SEQ ID NO:24), Rv3882 (SEQ ID NO:25), Rv3883 (SEQ ID NO:26), Rv3884 (SEQ ID NO:27), and Rv3885 (SEQ ID NO:28), in combination with at least one gene or fragment thereof selected from the group consisting of: Rv3872 (SEQ ID NO:15, mycobacterial PE), and Rv3873 (SEQ ID NO:16, PPE), ~~Rv3878 (SEQ ID NO:21), and Rv (SEQ ID NO:22).~~

65-71. (Cancelled)

72. (Currently amended) A transformed *M. bovis* BCG strain, wherein the strain has integrated a portion of DNA originating from *Mycobacterium tuberculosis* or any virulent member of the *Mycobacterium tuberculosis* complex (*M. africanum*, *M. bovis*, *M. canettii*), wherein the integrated DNA comprises the genes Rv3874 (SEQ ID NO:17, CPF-10), Rv3875 (SEQ ID NO:18, ESAT-6), Rv3868 (SEQ ID NO:11), Rv3869 (SEQ ID NO:12), Rv3870 (SEQ ID NO:13), Rv3871 (SEQ ID NO:14), Rv3876 (SEQ ID NO:19), and Rv3877 (SEQ ID NO:20), ~~or fragment thereof.~~